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Oxide Semiconductors as Antiviral Agents: Herpes Therapy from Lab to Pharmacy

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Herpes simplex viruses (HSV) establish lifelong infections, and the virus cannot yet be eradicated from the body. The HSV-2 type is one of the most frequent sexually transmitted infections worldwide with global estimates of 536 million infected people and an annual incidence of 23.6 million cases [1]. In this presentation, the antiviral potential of oxide semiconductors as antiviral agents will be discussed [2-4]. Oxygen vacancies are employed as adhesion sites of glycoproteins on the surface of the capsid and bind the virus effectively. It will be shown that oxid semiconductors can have a prophylactic, therapeutic as well as neutralizing effect. It will be explained how irradiation of UV-light can even increase the antiviral activity.

The cytotoxic effects [4] of the micro-crystalline material are discussed as well as how the material could be brought from lab into pharmacies.

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